

IN THE CLAIMS:

a' Claim 1 (currently amended): A microelectronic device, comprising:
a microelectronic die having an active surface, a back surface, and at least one side;
said at least one microelectronic die side comprising at least one trench sidewall, at least one lip and at least one channel sidewall, said at least one trench sidewall substantially planar to said at least one channel sidewall; and
a metallization layer disposed on said microelectronic die back surface and said at least one trench sidewall.

Claim 2 (canceled).

Claim 3 (currently amended): The microelectronic device of claim 2 1, wherein said at least one lip is substantially perpendicular to at least one of said at least one trench sidewall and at least one channel sidewall.

Claim 4 (currently amended): The microelectronic device of claim 2 1, wherein said at least one lip is substantially angled to at least one of said at least one trench sidewall and at least one channel sidewall.

Claim 5 (currently amended): The microelectronic device of claim 2 1, wherein said at least one lip is substantially curved to at least one of said at least one trench sidewall and at least one channel sidewall.

Claim 6 (original): The microelectronic device of claim 1, wherein said metallization layer is at least one metal selected from the group consisting of gold, silver, titanium, chromium, vanadium, tungsten, and nickel.

Claim 7 (original): A microelectronic device assembly, comprising:
a microelectronic die having an active surface, a back surface, and at least one side;
said at least one microelectronic die side comprising at least one trench sidewall, at least one lip, and at least one channel sidewall;
a metallization layer disposed on said microelectronic die back surface and said at least one trench sidewall; and
a heat dissipation device attached to said microelectronic die back surface with a thermal interface material.

Claim 8 (original): The microelectronic device assembly of claim 7, wherein said at least one trench sidewall is substantially planar to said at least one channel sidewall.

Claim 9 (original): The microelectronic device assembly of claim 8, wherein said at least one lip is substantially perpendicular to at least one of said at least one trench sidewall and at least one channel sidewall.

Claim 10 (original): The microelectronic device of claim 8, wherein said at least one lip

is substantially angled to at least one of said at least one trench sidewall and at least one channel sidewall.

Claim 11 (original): The microelectronic device of claim 8, wherein said at least one lip is substantially curved to at least one of said at least one trench sidewall and at least one channel sidewall.

Claim 12 (original): The microelectronic device assembly of claim 7, wherein said metallization layer is at least one metal selected from the group consisting of gold, silver, titanium, chromium, vanadium, tungsten, and nickel.

Claim 13 (original): The microelectronic device assembly of claim 7, wherein said thermal interface material is selected from the group consisting of lead, tin, indium, silver, copper, and alloys thereof.

Claim 14 (original): The microelectronic device assembly of claim 7, wherein at least a portion of a fillet of said thermal interface material extend from said metallization layer on said microelectronic die trench sidewall to said heat dissipation device.

Claims 15-28 (withdrawn)
